

an intermetallic compound on the base material, and

at least one of the first substance and the second substance is in molten form,  
and wherein each of the first substance and second substance comprises at least one metal.

2. (Amended) A method of welding a plurality of base materials to each other with an intermetallic compound, comprising the steps of:

piling up a first substance in powdery form or molten form on the base materials, and  
delivering a second substance in powdery form or molten form onto the first substance,

the second substance reacted with the first substance to thereby cause the plurality of base materials to be bonded to each other through a coating layer of an intermetallic compound, and

at least one of the first substance and the second substance is in molten form,  
and wherein each of the first substance and the second substance comprises at least one metal.

3. (Amended) The method as claimed in claim 1, wherein said coating layer of an intermetallic compound is fused to the base material.

4. (Amended) The method as claimed in claim 1, wherein the first substance comprises at least one metal selected from the group consisting of nickel, cobalt, iron, niobium, vanadium, molybdenum, tungsten, chromium and tantalum.

5. (Amended) The method as claimed in claim 1, wherein the second substance comprises at least one metal selected from the group consisting of aluminum and titanium.

6. (Amended) The method as claimed in claim 1, wherein the base material comprises a substance which is a metal or alloy of at least one member selected from the group

consisting of iron, nickel, cobalt, aluminum and niobium.

B<sub>1</sub> 7. (Amended) The method as claimed in claim 1, wherein the base material comprises a substance which is at least one metal selected from the group consisting of metals of the first substance, metals other than metals of the first substance but in the same group thereof of the periodic table, metals of the second substance, and metals other than metals of the second substance but in the same group thereof of the periodic table.

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B<sub>2</sub> 9. (Amended) The method as claimed in claim 1, wherein the first substance additionally contains a ceramic.

10. (Twice Amended) The method as claimed in claim 1, wherein the first substance is in powdery form or molten form and additionally contains a powdery or fibrous ceramic comprising an oxide, carbide, nitride or boride of at least one metal selected from the group consisting of aluminum, yttrium, titanium, zirconium, hafnium and silicon.

11. (Amended) The method as claimed in claim 1, wherein a coating layer comprising an intermetallic compound, an intermetallic compound having a ceramic dispersed therein, or an intermetallic compound containing a nitride is formed by the reaction between the first substance and the second substance.

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B<sub>3</sub> 14. (Amended) The method as claimed in claim 2, wherein the first substance is in powdery form or molten form and additionally contains a powdery or fibrous ceramic comprising an oxide, carbide, nitride or boride of at least one metal selected from the group consisting of aluminum, yttrium, titanium, zirconium, hafnium and silicon.

15. (Amended) The method as claimed in claim 9, wherein the first substance is in powdery form or molten form and additionally contains a powdery or fibrous ceramic comprising an oxide, carbide, nitride or boride of at least one metal selected from the group consisting of aluminum, yttrium, titanium, zirconium, hafnium and silicon.

Please add the following new claims:

16. (New) The method as claimed in claim 2, wherein said coating layer of an intermetallic compound is fused to the base materials.

B4 17. (New) The method as claimed in claim 2, wherein the first substance comprises at least one metal selected from the group consisting of nickel, cobalt, iron, niobium, vanadium, molybdenum, tungsten, chromium and tantalum.

18. (New) The method as claimed in claim 2, wherein the second substance comprises at least one metal selected from the group consisting of aluminum and titanium.

19. (New) The method as claimed in claim 2, wherein the base materials independently comprise a substance which is a metal or alloy of at least one member selected from the group consisting of iron, nickel, cobalt, aluminum and niobium.

20. (New) The method as claimed in claim 2, wherein the base materials independently comprise a substance which is at least one metal selected from the group consisting of metals of the first substance, metals other than metals of the first substance but in the same group thereof of the periodic table, metals of the second substance, and metals other than metals of the second substance but in the same group thereof of the periodic table.

21. (New) The method as claimed in claim 2, wherein the first substance additionally contains a ceramic.

22. (New) The method as claimed in claim 2, wherein a coating layer comprising an intermetallic compound, an intermetallic compound having a ceramic dispersed therein, or an intermetallic compound containing a nitride is formed by the reaction between the first substance and the second substance.

### DISCUSSION OF THE AMENDMENT

Claims 1 and 2 have each been amended by incorporating the subject matter of Claim 8 therein; Claim 8 has been canceled. In addition, these claims have been amended to make explicit what was at least already implicit, i.e., that each of the first substance and second substance comprises at least one metal. Claims 3-7, 9 and 11 have each been amended to depend on Claim 1 only. In addition, Claim 3 has been amended to recite that said coating layer is fused to the base material. Claims 4-7, 11, 14 and 15 have been amended by replacing "constituted of" with --comprising--. Claim 7 has been amended by replacing "metal homologous thereto" with language intended as equivalent, as supported in the specification at page 19, lines 3-15. Claims 9, 10, 14 and 15 have each been amended to make it clear that the first substance --additionally-- contains a ceramic.

New Claims 16-22 have been added, corresponding to Claims 3-7, 9 and 11, respectively, but dependent on Claim 2. Note that Claims 19 and 20 recite that the base materials --independently-- comprise the recited materials, since there is no description that each base material must be identical.

No new matter has been added by the above amendment. Claims 1-7 and 9-22 are now pending in the application. Of these claims, Claim 13 stands withdrawn from consideration.

### REMARKS

The present invention relates to a coating method (or bonding method) which is useful in coating a base material with an intermetallic compound or bonding base materials to each other with an intermetallic compound and relates to a coating apparatus therefor. More particularly, the present invention is concerned with a technology which can be applied to, for